GAMMA RAY LARGE AREA SPACE TELESCOPE (GLAST)

International Collaboration / Technology Transfer Control Plan

September 10, 2004

Goddard Space Flight Center
Greenbelt, Maryland

Gamma Ray Large Area Space Telescope Project
International Collaboration /
Technology Transfer Control Plan

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Table of Contents

Page

Appendix A
Forms

Figure **Page**

1 PURPOSE AND SCOPE

This document is presented to provide an overview to the various international collaboration considerations that will be experienced through the phases of the GLAST project. Such considerations will include import/export considerations to include application of the International Traffic in Arms Regulations (ITAR).

1.1 REFERENCE DOCUMENTS

1.1.1 NASA Documents

GSFC Form 20-4	Invoice/Shipping Document
GSFC Form 20-70	Property Loan Agreement for Government Employees
GSFC Form 20-72	Removal of Government owned Property Request by contractor for 30 days or less
GSFC Form 25-51	GSFC STI Public Disclosure Export Control Checklist
GSFC Form 25-52	GSFC Software Public Disclosure Export Control List
GLAST-PROC-0001	GLAST Program Configuration Management Procedure
GLAST-PROC-0002	GLAST Program Data Management Procedure
NPG1371.2	Procedures and Guidelines for Foreign Access to NASA Centers
NPD2190.1	NASA Export Control Program
NPG2190.1	NASA Export Control Program
NPD2210.1	External Release of NASA Software
NPD 2220.5	Management of NASA Scientific and Technical Information (STI)
NPG2210.1	External Release of NASA Software
NPG 2200.2	Guidelines for Documentation, Approval, and Dissemination of NASA STI
NPG2810.1	Security of Information Technology
NASA Form 1676	NASA Scientific and Technical Document Availability Authorization Form
NASA Form 1679	Disclosure of Invention and New Technology (Including Software)

1.1.2 Non-NASA Documents

Customs Form CF7501	Entry Summary
DD1149	Requisition and Invoice/Shipping Document
State Department Form DSP-5	Request For Permanent Export of Unclassified Defense Articles And Related Unclassified Technical Data

1.2 DEFINITIONS

"Defense Article" - Any item on the USML, including "technical data."
Note: Contrary to popular opinion, Defense Articles are not exclusively "military" items; e.g., all remote sensing satellites are "Defense Articles," the "Space Shuttle" is a "Defense Article," etc.

Exception - An authorization that allows you to export or re-export, under stated conditions, items subject to the Export Administration Regulations (EAR) that would otherwise require a license.

Exemption - Relief from the securing of an export license or other written approval from the Office of Defense Trade Controls to export defense articles or defense services.

Export - A Simplified Definition - The transfer of anything to a "Foreign Person" by any means, anywhere, anytime, or the knowledge that what you are transferring to a "U.S. Person," will be further transferred to a "Foreign Person."
NOTE: The means of transfer can be: mail; fax; e-mail; www, ftp, etc.; shipping; hand carry; phone or face-to-face discussion; other.

Export - Commerce Controlled - Export Administration Regulations (EAR), 15 CFR PART 768-799 - Export means "the physical movement of all hardware and/or technical data to another country for any purpose, whether or not the hardware and/or technical data is explicitly listed on the Commerce Controlled List (CCL). It includes domestic disclosures of technical data and software to foreign nationals, and domestic transfers with the knowledge or intent that the transferred hardware, software, or technical data will be provided to a foreign party."

Export - State Controlled - International Traffic In Arms Regulations (ITAR), 22 CFR PART 120.17 - Sending or taking a "defense article" out of the U.S. in any manner, except by mere travel outside of the U.S. by a person whose personal knowledge includes "technical data," or transferring registration, control, or ownership to a foreign person of any aircraft, vessel, or satellite covered by the United States Munitions List (USML), whether in the U.S. or abroad; or Disclosing (including oral or visual) or transferring in the U.S. any "defense article" to an embassy, any agency or subdivision of a foreign government; or disclosing(including oral or visual disclosure) or transferring "technical data" to a "foreign person," whether in the U.S. or abroad; or performing a "defense service" on behalf of, or for the benefit of, a foreign person, whether in the U.S. or abroad.

Foreign Person - Any natural person who is not a lawful permanent resident as defined in 8 U.S.C. 1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. 1324(a)(3).

Interim Letter of Agreement (ILOA) - A temporary international agreement while the final international agreement is pending.

Letter of Agreement (LOA) - Same as Memorandum of Understanding, less detailed. This usually covers a "routine NASA international agreement."

Memorandum of Understanding (MOU) - Contractual/cooperative agreement between NASA and a foreign space agency. This usually covers a "significant international agreement." A Memorandum of Understanding (MOU) is typically approved by the U.S. State Department under the Circular 175 process.

Public Domain - Information which is published and which is generally accessible or available to the public through:

- sales at newsstands and bookstores;
- subscriptions which are available without restriction to any individual who desires to obtain or purchase the published information;
- second class mailing privileges granted by the U.S. government;
- libraries open to the public or from which the public can obtain documents;
- through patents available at any patent office;
- unlimited distribution at a conference, meeting, seminar, trade show or exhibition, generally accessible to the public, in the United States;
- public release (i.e., unlimited distribution) in any form (e.g., not necessarily in published form) after approval by the cognizant U.S. government department or agency;
- fundamental research in science and engineering at accredited institutions of higher learning in the U.S. where the resulting information is ordinarily published and shared broadly in the scientific community.
  Fundamental Research is defined to mean basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research the results of which are restricted for proprietary reasons or specific U.S. government access and dissemination controls.

University research will not be considered "fundamental research" if:
the University or its researchers accept other restrictions on publication of scientific and technical information resulting from the project or activity, or the research is funded by the U.S. government and specific access and dissemination controls protecting information resulting from the research are applicable.

Related entities- reference made in NASA international agreements to NASA or NASA foreign partner contractors, subcontractors, etc.

Technical Assistance- a.k.a “Defense Service” means the furnishing of assistance (including training) to foreign persons, whether in the United States or abroad, in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing, or use of defense articles as defined in 22 CFR Part 120.6. See 22 CFR Part 120.9 for more

description of a defense service.

Technical Assistance Agreements- authority approved by U.S. State Department obtained by U.S. entity to support exchange of ITAR sensitive technical data and technical assistance with foreign entities.

Technical Data - Information, including software, which is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of "defense articles." NOTE: Does not include information concerning general scientific, mathematical or engineering principles commonly taught in schools, colleges and universities or information in the "public domain." It also does not include basic marketing information on function or purpose or general system descriptions of "defense articles."

U.S. Person - A natural person who is a lawful permanent resident as defined in 8 U.S.C. 2202(a)(20) or who is a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any corporation, business association, partnership, society, trust, or any other entity, organization or group that is incorporated to do business in the U.S. It also includes any governmental (federal, state or local), entity.

2 COMMON GSFC PROJECT/PROGRAM EXPORT/IMPORT CONSIDERATIONS

The following export/import considerations are common to most GSFC flight projects & programs. Section No. 2 will provide a general overview of the export/import considerations of the GSFC Flight Projects/Programs that have international collaboration with international partners. The following subsections of 2.0 will also provide a brief look at the process for dealing with these considerations. GSFC staffs a GSFC Export Control Office, if there are any questions concerning export control. The GSFC Export Control Office also maintains a web-site at http://export.gsfc.nasa.gov)

2.1 INTERNATIONAL TRAFFIC IN ARMS REGULATIONS

NASA is to plan and develop the GLAST with direct international collaboration from the Deutsches Zentrum fuer Luft-und Raumfahr (DLR) on the GLAST Burst Monitor (GBM), and with entities in Sweden, France, Italy and Japan to support collaboration on the Large Area Telescope (LAT). The GLAST development activities, as well as all requirements to export hardware, software, and technology, will fall under the jurisdiction of the United States (US) State Department. Most requirements to export will fall under the State Department International Traffic in Arms Regulations (ITAR). As a general rule, any technical data regarding GLAST that exceeds general purpose, marketing level information, or information that has been previously placed into the public domain is subject to control under the ITAR. As a result, NASA will work under the authority of a Letter of Agreement (LOA) to support activities on GLAST. The existence of these LOA(s) will support the NASA use of appropriate ITAR exemptions, and support the acquisition of any State Department export licenses, as necessary.

2.2 LETTER OF AGREEMENT (LOA)

NASA is currently operating under the framework of LOA negotiated between NASA and the Deutsches Zentrum fuer Luft-und Raumfahr (DLR). The LOA between NASA and the Deutsches Zentrum fuer Luft-und Raumfahr (DLR) became effective June 19th, 2002. This LOA will remain in force for a period of six years following launch of the GLAST spacecraft, or until January 1, 2012, whichever is earlier.

NASA is developing LOA(s) to support international collaboration with entities in Sweden, France, Italy and Japan to support small flight hardware and science contributions on LAT.

2.3 PHASES OF GSFC PROJECTS/PROGRAMS

2.3.1 Formulation Phase

Discussions in the Formulation Phase tend to be broad, conceptual, and generally absent of actual applied engineering and design information. This scenario generally affords NASA the ability to conduct, relatively broad discussions between NASA and the desired foreign party(s). As always, exchange of any NASA ITAR sensitive technical data must satisfy a "need to know" argument, must fall within the scope of the responsibilities of a standing LOA, and fall under an appropriate TAA or exemption to the ITAR.

2.3.2 Implementation Phase

By contrast to the Formulation Phase activities, exchange of technical information within the Implementation Phase must be more deliberate, supported by the responsibilities in the LOA/MOU between NASA and the international partners, and by available ITAR exemptions. Exchange of technical data will involve the interface of information and will be conducted in design reviews and technical interchange meetings. On occasion, there may be a need to partition technical meetings so that foreign parties are excluded from sessions where subject matter is to be discussed exceeds what is necessary for the foreign party(s) to know, to satisfy their responsibilities under the working international agreement, or is beyond the scope of the applicable LOA/MOU. As always, NASA must ensure that the "need to know" argument is satisfied, within the responsibilities of the appropriate LOA(s).

2.4 INDUSTRY PRIME/TECHNICAL ASSISTANCE AGREEMENTS/NON-DISCLOSURE AGREEMENTS

2.4.1 NASA Contractor Export Control Philosophy

The GLAST Project will adopt the NASA Contractor Export Control philosophy found in the NASA Procedural Requirements (NPR) 2190.1, April 10, 2003 release. NPR 2190.1 section 3.1 states: "In general, NASA is not responsible for contractors' export compliance in the execution of contracted work (see NFS 1825.1103-70 and 1852.225-70). The exception is an instance in which NASA directs or authorizes a contractor to effect exports using NASA-obtained Independent Validated License (IVL) or Government Bill of Lading (GBL)." In fulfilling the NASA Export Control philosophy, the GLAST Project anticipates contractors full participation and compliance with all NASA Export Control Requirements.

2.4.2 GLAST Industry Prime/Spacecraft Provider

The selected GLAST spacecraft provider, Spectrum Astro is expected to obtain licensing authority in the form of Technical Assistance Agreements (TAA) s with foreign partners and related entities in support of their performance of the spacecraft development contract.

2.4.3 Technical Assistance Agreements

The Goddard Space Flight Center (GSFC) anticipates that the selected prime spacecraft provider Spectrum Astro and subcontractors will choose to obtain a State Department-approved TAA to support the provision of technical data and technical assistance to DLR and their eventual related entities within the GLAST Implementation Phase, in support of their exchange with DLR on GBM. Spectrum Astro is also expected to obtain Technical Assistance Agreements to support required exchange with foreign collaborators on LAT. Spectrum Astro is expected to include in their TAA(s) with the GBM and LAT international partners activities which would occur at the launch site processing facility.

The TAA(s) of Spectrum Astro may also include US entities to be involved with the Prime Contractor in directly participating in the GLAST activities. Otherwise, the subcontractors of Spectrum Astro may choose to obtain their own TAA.

In addition to requesting signatures on the TAA(s) from DLR and DLR's prime contractor, the Max Planke Institute for GBM, and from the Swedish, French, Italian and Japanese international partners on LAT, Spectrum Astro may also request that all foreign entities actively participating as subcontractors to GBM and LAT respectively become signatory to their respective TAA(s). Active participation would generally mean direct participation in technical meetings, having access to the US Prime Contractor's facilities, and participation in any portion of Program integration and testing (I&T) efforts.

Boeing is exploring the need to obtain a TAA to support their integration of the payload attach fitting onto the GLAST spacecraft in the possible presence of GBM and/or LAT international partners.

The completion of TAAs has proven to be a long lead-time item on other NASA programs, possibly causing delays in critical activities. Delays may be caused by the requirements to amend existing TAAs to add domestic or foreign entities, the addition of unacceptable limitations and provisos or out-right denial in limited cases by the U.S. State Department, as well as reluctance by the foreign partners to sign the TAAs in many cases. TAA preparation time should be factored into Program schedules because TAA completion will critically affect the Program.

2.4.4 Non-Disclosure Agreements

In addition to signing the Spectrum Astro TAA, the US State Department within the TAA approval process may require all parties who are signatory to the Prime Contractor TAA to sign a non-disclosure agreement.

2.5 TECHNOLOGY TRANSFER

2.5.1 Written Technical Data

NASA generally can share ITAR-controlled technical data with the foreign partners (and related entities) by authority of the LOAs and MOUs, utilizing exemptions to the ITAR [22 CFR 126.4 / 22 CFR 125.4 (b)(3)]. The technical data to be transferred must be supported by the requirements and responsibilities section in the LOA/MOU and must not be specifically excluded by the Transfer of Technical Data and Goods section in the LOA/MOU.

2.5.2 NASA Provided Software

NASA-provided software would generally be classified as technical data when transferred to foreign partners and related entities. When embedded into ground support equipment (GSE) or flight hardware, the software will be classified for export consistent with the modification of the higher hardware assembly. As most NASA software will be treated for export as if it were other technical (written) data, there is a requirement to mark the software to limit dissemination.

If NASA needs to transfer encrypted software and/or source code, these requirements are handled as special cases and may be required to include special licensing.

2.5.3 Destination Control Statement

As NASA is forwarding technical data under specific exemption from licensing the receiving foreign partner [and/or related entity(s)] needs to know that the subject data is to be protected in accordance with the *Transfer of Technical Data and Goods* clauses of the LOA(s)/MOU(s). The clause that NASA shall place (usually as a footer) on ITAR sensitive, technical data provided to the NASA foreign partner is as follows:

> **These items are licensed by the United States for ultimate destination to *German Aerospace Center DLR*. Diversion, retransfers, disclosure, or use contrary to applications specified in NASA agreement without prior United States authorization are prohibited.**

Comment: If NASA does not mark the data as indicated above, the foreign partner cannot know to protect the data, and therefore is under no obligation to protect NASA ITAR sensitive data as required in the international agreement.

It is expected that SLAC will develop and utilize similar destination control statements to support control of exchange of ITAR sensitive technical data with GLAST foreign partners.

2.5.4 Public Release of Technical Data/Software

If there is a desire to release GLAST ITAR sensitive technical data into a public forum (i.e. release through presentation and/or publication), the NASA sponsor of the document should following the requirements and processes discussed in NPD 2220.5, "*NASA Scientific and Technical Information (STI)"* and in NPG 2200.2, "*Guidelines for Documentation, Approval, and Dissemination of NASA STI"* and utilizing NF 1676, "*NASA Scientific and Technical Document Availability Authorization"* Form. A GSFC Form 25-49 is also required for any STI reviews at GSFC.

Public release of NASA software could be completed utilizing the process associated with NPD2210.1, "*External Release of NASA Software"* and using NF 1679, "*Disclosure of Invention and New Technology (Including Software)".* A GSFC Form 25-51 is required for any software releases at GSFC.

2.6 GSFC PROJECTS/PROGRAMS CUSTOMS/TRANSPORATION ISSUES

All "physical" exports of hardware, software, and/or technical data by NASA GSFC will be reviewed and approved by the NASA/GSFC Export Control Office.

2.6.1 Hardware

2.6.1.1 Temporary Exports of NASA Hardware

Under most conditions, ITAR controlled NASA hardware can be temporarily exported to a location outside of the United States without a State Department license applied for using a DSP-73, license for the temporary export of unclassified defense articles utilizing Government ITAR exemption 22 CFR 126.4. Generally, the following conditions **must** be satisfied:

1. The hardware must be **temporarily** exported to meet stated NASA responsibilities in the GLAST LOA and

2. The hardware is to remain under NASA ownership.

Temporary exports of ITAR controlled items by NASA will be executed using the 22 CFR 126.4 exemption. Such use will be coordinated with the Center Export Administrator (CEA) and reported to the Headquarters Export Administrator (HEA) in accordance with NASA NPG 2190.1, NASA Export Control Program. The Government exemption affords NASA the flexibility to modify shipping lists and shipment characteristics up to the time of shipment, under most conditions.

Comment – *U.S. industry must have a "paper license"DSP-73 through the State Department to temporarily export NASA items from the U.S.*

2.6.1.2 Permanent Exports of NASA Hardware

ITAR-controlled NASA hardware can be exported to a location outside of the U.S. with an export license, a process initiated by utilizing State Department Form DSP-5, *Request For Permanent Export of Unclassified Defense Articles And Related Unclassified Technical Data*. Generally, the following conditions **must** be satisfied:

1. The hardware must be exported to meet stated NASA responsibilities in the LOA/MOU and

2. The hardware is to transfer ownership, **or**

3. The hardware is to be launched from a foreign launch site on a foreign launch vehicle. Hardware that is to launch on a foreign launch vehicle will always require a State Department export license.

2.6.2 Return of NASA Hardware from Foreign Partner Facilities

As most of the hardware that will be exported to the GLAST foreign collaborators is ITAR-controlled, it is critical that the foreign partner return of such hardware is coordinated through the GLAST Project and the NASA GSFC Logistics Management Division (Code 230). NASA must be shown as the importer of the hardware to simplify this process. The shipment should not be addressed exclusively to a receiving contractor.

Example:

For shipment to company X in Arizona, the shipment should be addressed as follows:

Shipment to:

NASA Goddard Space Flight Center
For forwarding to:
Company X
Any town, AZ

NASA hardware is returned duty free from foreign partner and related entity locations outside of the US.

NASA will pay freight charges and handling fees assessed in the US for all NASA shipments to foreign locations. DLR will pay all freight charges and handling fees to return all NASA hardware items from DLR and related entity locations. NASA will pay all freight charges and handling fees to return all foreign hardware items to the foreign partners and related entities locations. The GLAST LOAs contain a general obligation to facilitate free customs clearance (e.g. waiver of applicable duties or taxes) for entrances to, and exits from, each side's respective country(s) for material required for GLAST.

2.6.3 NASA Importation of German Aerospace Center DLR Hardware

DLR provided flight and non-flight hardware, can be imported into the U.S. duty free utilizing the NASA Import Certification Process in accordance with 14 CFR Part 1217. These same items are imported temporarily into the U.S. license free under 22 CFR 126.4 or can be imported permanently without a license under Department of the Treasury, Bureau of Alcohol, Tobacco, and Firearms; 27 CFR § 47.53.
This process requires that a blanket GLAST NASA Import Certification be generated by NASA Headquarters, Code IS after the development of the associated LOA. When individual imports are anticipated, the GLAST Program Manager must verify in writing that specifically identified articles to be entered on a particular date are the articles described in the GLAST Importation Certification. No additional requirements (i.e. Customs Form CF7501) should be required.

Currently, NASA imports of DLR hardware are anticipated to be shipped to the Marshall Space Flight Center.

Should there become a need to ship hardware directly to the GLAST prime contractor or other U.S. industry locations, the following process should be followed.

The hardware should be shipped to the ultimate U.S. destination, however, NASA must be shown as the importer of the hardware, to effect import as NASA is the holder of the Import Certification. The shipment should not be addressed exclusively to a receiving contractor.

Example:

For shipment to company X in Arizona, the shipment should be addressed as follows:

Shipment to:

NASA Goddard Space Flight Center
For forwarding to:
Company X
Any town, AZ

In addition to this requirement, the U.S. industry destination will most likely require that NASA generate a NASA GSFC 20-4 or equivalent DD1149, *Requisition and Invoice/Shipping Document,* so that the DLR items can be provided as Government Furnished Equipment.

SLAC is anticipated to execute its own import process to import LAT hardware from international LAT team locations outside the United States.

2.6.4 NASA Importation of GLAST Items Procured Outside of the United States

Items procured outside of the United States can be imported duty free into the United States utilizing the NASA Import Certification Process in accordance with 14 CFR Part 1217.

This process requires that an Importation Certification be prepared and endorsed by the NASA Headquarters (HQ) or GSFC Procurement Officer. In addition, a Customs Form CF7501 (Entry Summary) will need to be generated by the GSFC Logistics Management Division Transportation Branch.

2.6.5 Hand Carry of NASA Hardware from the United States

Hand carrying of NASA hardware (including NASA computers) from the U.S. needs to be planned and executed as if it were to be transported via a commercial carrier to a foreign location. The hand carry of NASA hardware will require a "Letter of Authorization" and GSFC Form 20-4, "Invoice-Shipping Document", or for NASA controlled equipment, a GSFC Form 20-70, "Property Loan Agreement for Government Employees" and or GSFC 20-72, "Removal of Government Property" may also be required. Samples available at : http://export.gsfc.nasa.gov

Severe fines and penalties can be levied to the traveler if improper procedures are used to hand carry NASA hardware from the US, particularly items that are controlled by the ITAR. Severe fines and penalties can also result if ITAR-controlled items are improperly brought back into the US as well.

Special provisions/an export license will be needed if a contract employee is to hand carry an ITAR-controlled NASA item from the US in support of the GLAST mission.

2.7 FOREIGN NATIONAL VISITOR PROCESSING

Comment- Foreign nationals of countries other than the United States, who currently have U.S. "Green Card" status, and who are employed by U.S. entities are not restricted by the ITAR regulations. This interpretation is consistently recognized by NASA and U.S. industry.

2.7.1 Short-Term Visitors To GSFC

The GLAST Project Office will arrange for the necessary visitor documentation to support short term visits by members of the GLAST international partners (and related entities), by complying with 22 CFR 125.5 of the ITAR. Foreign nationals under the employ of a US contractor will also be cleared using the following process; however, the US contractor is responsible for obtaining any State Department licensing or TAAs as authority to access GSFC.

All foreign visitors to GSFC or US citizens must be approved through NASA's Foreign National Management System (NFNMS). This process requires the completion of a ***Foreign Visitor Information Sheet (Appendix A, Figure 1).*** This profile sheet should only need to be completed once as a permanent record of one's citizenship, passport number, and other pertinent information.

In addition, the NASA sponsor of the foreign national visit needs to fill out at least two additional forms ***Goddard Space Flight Center Information Concerning Foreign National's Visit to GSFC (Appendix A Figure 3) & Access For Foreign National to GSFC (Appendix A Figure 2),*** which requires the GSFC sponsor to profile the particulars of the GSFC visit (i.e. location, sensitivity, names of visitors, if export sensitive, the legal authority for visit, etc.). In addition, the foreign nationals will require escorting by a GSFC sponsor, which requires ***Goddard Escort Form (Appendix A Figure 4).***

These forms must be submitted by fax to the GSFC International Visits Coordinators Office (Code 240) for processing. The Goddard Escort Form is completed on the day of the foreign national(s) visit. Visits from countries of non-concern or non-proscribed countries typically require 20 business days to process. Visit requests from individuals from proscribed countries take a minimum of 60 days.

Visit requests are reviewed by the appropriate Security and Export Control activities at GSFC. Visit requests may be forwarded to NASA HQ, such as requests from residents of proscribed countries.

2.7.2 Long-Term Visitors (GSFC Badged Visitors)

The GLAST Project Office will arrange for visitor documentation to support long-term visits by members of GLAST international partners (and related entities) by complying with 22 CFR 125.5 of the ITAR and NASA NPG 1371.2 – Procedures and Guidelines for Foreign Access to NASA Center. Foreign nationals under the employ of a US contractor will also be cleared using the same process; however, the US contractor is responsible for obtaining any State Department licensing or TAAs as authority to support this access to GSFC.

GLAST can arrange for long-term foreign visitors to the GSFC or US citizens representing foreign entities to receive a GSFC picture badge after special approvals. Such approvals are currently under review. The long-term visitor must access GSFC on-average three days a week to be eligible for a picture badge. As in the case of short-term access to GSFC, long-term, badged visitors must be approved through NASA's Foreign National Management System (NFNMS). Long-term, badged visitors may also be required to be approved through a National Agency Check (NAC) process or equivalent.

Comment: Access granted pursuant to 22 CFR 125.5 will not provide for access to technical data which could be used for design, development, production or manufacture of a defense article.

2.8 FACILITIES

2.8.1 Office Space/Integration & Test Areas

GSFC is required to restrict visiting international partner access to controlled GLAST Program areas, where the only sensitive, technical data available (regardless of medium) is authorized under GLAST International Agreements. GSFC should not permit access to any other GSFC program areas or technical data. GSFC GLAST sponsors and assigned escorts will ensure that GSFC visitors stay within authorized work areas.

2.9 COMPUTER ACCESS

The GLAST Project Office will work with the GSFC Center Information Office (CIO) and Computer Security Activity to ensure appropriate computer access for non-US Permanent Residents in accordance with NASA NPG 2810.1 Security of Information Technology. The GLAST Project Office will need to ensure that a NASA Request For Foreign National Computer Access (Figure **5**) is completed for each such request for GSFC computer access. The GLAST Project Office expects that GLAST international partner employees and foreign nationals will have controlled access to select servers through GSFC Intranet only. Access will be limited to servers which do not contain technical data, or which contain technical data, permitted to be disclosed pursuant to an applicable license or exemption, under the authority of the standing LOA. In addition, the GLAST Library will establish a process to limit access by foreign nationals to select areas of the GLAST Library, where documents have been intentionally distributed, in accordance with the GLAST LOA(s).

3 GLAST "UNIQUE" PROCESSES FOR CONTROL OF ITAR SENSITIVE TECHNICAL DATA

3.1 ADD FUTURE GLAST IT PLAN

3.2 CONFIGURATION MANAGEMENT/DATA MANAGEMENT

3.2.1 Configuration Management

The GLAST Configuration Management Procedure 433-PROC-0001 contains language that controls the flow of controlled documentation to members of GLAST international partners and related entities, as covered under GLAST LOAs. All export controlled documents transferred will be marked in accordance with the GLAST LOA(s) transfer of technical data clause. Only documents required by the program that are covered by the LOA(s) and do not disclose detailed design, development, and production data can be transferred. This process will help ensure that documentation forwarded to GLAST international partners is limited to technical information that is supported by the responsibilities in the LOAs.
Currently, attendance at GLAST Configuration Control Boards (CCB(s) will be limited to U.S. entities.

The GLAST ITAR representative will serve as an ad hoc representative and advisor to the GLAST CCB.

3.2.2 Data Management

The GLAST library has established a Data Management process to limit access by foreign nationals to select areas or deliberate access areas of the library, where documents will be intentionally distributed, in accordance with the GLAST LOA(s) and the GLAST Data Management Procedure, GLAST-PROC-(0002).

3.3 GLAST PROGRAM REVIEWS

In support of GLAST Program Reviews, “need to know” arguments must be satisfied.

GLAST will need to partition meetings when GLAST foreign partners are involved to meet the requirements of the ITAR. The international partners will only participate in the technical discussion meetings where NASA can support a "need to know" argument in documented deliverables, and the responsibilities within the current LOAs. The international partners of GLAST will be able to participate within certain sessions of GLAST technical meetings, where these partners have a “need to know” , and excluded from other sessions where partners do not have a “need to know”.

The level of technical exchange in GLAST Systems Reviews should be at the interface level when the international partners are involved. Generally, under the current scope of the planned collaborations with DLR, interface level information only is expected to be exchanged between NASA and the DLR team. At this time, discussions on detailed design information are not anticipated with the international partners. If discussions that require disclosure of detailed engineering design, production and/or manufacturing information become necessary, the GLAST Export (ITAR) Representative must be consulted, prior to any such disclosure. The GLAST Export/ ITAR Representative may forward this request to the GSFC Export Administrator and/or NASA Headquarters Export Control Office (Code I) for consideration.

4 INTERNATIONAL CONTRIBUTION SUMMARY MATRIX

The formulation and implementation activities of the GLAST Program will require the transfer of hardware, software, and technical data to support the relationships as presented in the International Contribution Summary Matrix below.

Institution	**Responsibility**
GSFC	GLAST Mission Management, provide Spacecraft bus, launch vehicle, Science Working Group, conduct tracking, telecommunications, and operations
US / Spectrum Astro	GLAST Spacecraft provider, Provide GLAST I & T
GBM	
GBM Project/MSFC	GBM Instrument
Germany / DLR	Nal & BGO detector assemblies
LAT	
DOE	LAT Program Funding
SU-SLAC	LAT Instrument
ITALY/ASI/INFN	SI Detectors, Tracker fabrication, Assembly & test
France/CNES/IN2P3	Calorimeter structure design & Fabrication

Japan/JGC	Si detectors
Sweden/KTH	Csi crystals
NRL/Swales	Calorimeter CDE's & Photodiodes, Calorimeter electronics, Management, integration & test, DAQ
GSFC	Anti-Coincidence detector (ACD)
UCSC/SCIPP	Tracker management, Tracker cable Plant, electronics design, fab & test
Univ. of Washington	Optical fibers

5 INDIVIDUAL INTERNATIONAL COLLABORATIONS (GBM & LAT)

5.1 GLAST BURST MONITOR (GBM)

NASA's Marshall Space Flight Center is the Principal Investigator for the GLAST Burst Monitor. MSFC is responsible for building the GLAST Burst Monitor and will be the primary NASA exporter of NASA hardware, software and technical data, as necessary. The Max Planke Institute (MPE), under contract to DLR, will be developing and providing flight detectors for the GBM instrument with suitable attachment for integration onto the GLAST spacecraft. In addition, *DLR and team* will provide a thermal system to regulate temperature and high power supplies that will provide power to GBM.

5.1.1 NASA HARDWARE EXPORTS (GBM)

5.1.1.1 NASA, through the MSFC, will export associated flight connectors and GSE breadboard(s) to DLR and related entities to support GBM detector development and testing efforts.

5.1.1.1.1 The above exports will be temporary exports, and thus will be done without a license under an export license exemption. Temporary exports of ITAR controlled items will use the 22 CFR 126.4 exemption, and such use will be coordinated with the Center Export Administrator (CEA) and reported to the Headquarters Export Administrator (HEA) in accordance with NASA NPG 2190.1, NASA Export Control Program.

5.1.1.2 DLR/MPE-Procured Hardware in the United States

DLR may choose to procure parts and spares from US vendors in support of DLR's responsibility to build and provide the GBM detectors and power supplies. The US vendors will evaluate export requirements and license the export to DLR and related entities as required.

DLR may choose to solicit parts and spares from NASA's inventory of flight spare parts in support of its responsibility to build and provide the detectors and power supplies for GBM. To implement this, NASA will require a modification to the NASA/ DLR international agreement for such activities and possibly, an export license.

5.1.2 NASA SOFTWARE EXPORTS (GBM)

No exports of NASA software for GBM are anticipated.

5.1.3 NASA TECHNICAL DATA TRANSFERS (GBM)

Technical data transfer requirements to DLR and team must always satisfy a "need to know" argument.

NASA is to provide to DLR and related entities "interface level" technical data and technical assistance required to support integration of DLR provided hardware to the GLAST spacecraft.

NASA is restricted from providing to DLR detailed design and/or manufacturing "know how" on the NASA contributions. In addition, NASA will not exchange detailed design information to assist the DLR Team with their related contributions.

If discussions are anticipated that require disclosure of detailed engineering design, production and/or manufacturing information, the GLAST Export (ITAR) Representative must be consulted, prior to such discussions. The GLAST Export ITAR Representative may forward these requests to Code I for consideration.

5.2 LARGE AREA TELESCOPE (LAT)

Stanford's Linear Accelerator Center (SLAC) is the Principal Investigator for the GLAST Large Area Telescope. Stanford has developed a team to include the University of California, Santa Clara, the ACD activity at GSFC and the Naval Research Laboratory to support the development of LAT. The Stanford team has engaged four international partners from Sweden, France, Italy and Japan to support SLAC's LAT development efforts.

The SLAC Project Office has developed an ITAR controlled, sensitive branch identified to handle ITAR issues within the SLAC LAT team.

5.2.1 NASA HARDWARE EXPORTS (LAT)

5.2.1.1 NASA will not be exporting hardware in support of LAT. Stanford, in their role as exporter for LAT will ensure that all exports conducted to support the LAT effort will be compliant to U.S. Export Regulations.

5.2.1.2 LAT Foreign Provided Hardware -Procured in the United States

Foreign partners to the SLAC team may choose to procure parts and spares from US vendors in support of their responsibility to build and provide hardware to the LAT team. The US vendors will evaluate export requirements and license the export to the foreign LAT team as required.

5.2.2 NASA SOFTWARE EXPORTS (LAT)

No NASA exports of software are expected for LAT.

5.2.3 NASA TECHNICAL DATA TRANSFERS (LAT)

NASA will not release ITAR sensitive technical data until a LOA between NASA and LAT international partners is concluded. Once the LOA(s) is concluded, technical data transfer requirements to the SLAC foreign collaboration team must always satisfy a "need to know" argument.

NASA is to provide to LAT foreign partners and related entities covered under an LOA "interface level" technical data and technical assistance required to support integration of provided hardware to the LAT instrument.

NASA is restricted from providing to the LAT foreign teams detailed design and/or manufacturing "know how" on the NASA contributions. In addition, NASA will not exchange detailed design information to assist the LAT foreign teams with their related contributions.

If discussions are anticipated that require disclosure of detailed engineering design, production and/or manufacturing information, the GLAST Export (ITAR) Representative must be consulted, prior to the discussions. The GLAST Export ITAR Representative may forward these requests to Code I for consideration.

6 SCIENCE AND OPERATIONS EXCHANGE

6.1 OVERVIEW

NASA will provide tracking, telecommunications, and operations of the GLAST spacecraft in accordance with the GLAST LOA. In addition, NASA will establish and support a GLAST Science Working Group which will provide support to the LAT and GBM instrument teams.

6.2 S&OC TECHNOLOGY TRANSFER

As always, any technical data transfer requirements to the GLAST foreign partners and team in support of operations and science activities should satisfy a "need to know" argument within the guidelines for each of the instruments stated above.

7.0 LAUNCH VEHICLE

The GLAST observatory will be launched from Cape Canaveral Florida on board a Delta launch vehicle.

Very limited technical information regarding GLAST interface with the Delta launch vehicle is anticipated to be exchanged with the international partners on GLAST. Spectrum Astro is reviewing

the need for TAA(s), to cover possible ITAR sensitive exchanges at the launch site processing facility with GLAST foreign participants. Likewise, Boeing is reviewing their need for a TAA to cover their integration of a payload attachment fitting to the GLAST spacecraft at the launch site processing area in the possible presence of GLAST international partners.

Appendix A

Forms

Foreign Visitor Information Sheet
(Please TYPE OR PRINT)

First Name: _____
Middle Name or Initial or NMI (No Middle Initial): _____
Last (or Family) Name: _____
Gender: Male _____ Female: ____
U.S. Social Security Number (if applicable): _____
Are you a Permanent Resident Alien (Greencard Holder): No ___ Yes ___
If Yes, Number: ._____; Expiration Date: _____
Date Issued (mm/dd/yyyy): _____
Expiration Date (mm/dd/yyyy): _____
Country of Citizenship: _____
Date of Birth: Month_____ Day_____ Year _____
Country of Birth: _____ City of Birth: _____
Permanent Home Address:
_____

Place & Date of Entry into U.S.:
Current U.S. Address (if applicable)

Figure 1

NASA Installation to be visited: _____
NASA Point of Contact: _____
Planned dates of visit (inclusive): _____

Affiliation or Employer:

Institution or Company Name: _____
Street Address: _____
City: _____
State/Country: _____
Zip Code: _____
Title or Position and Duties:
_____

Phone Number: _____
Fax Number: _____
E-mail Address: _____

U.S. Visa Information:

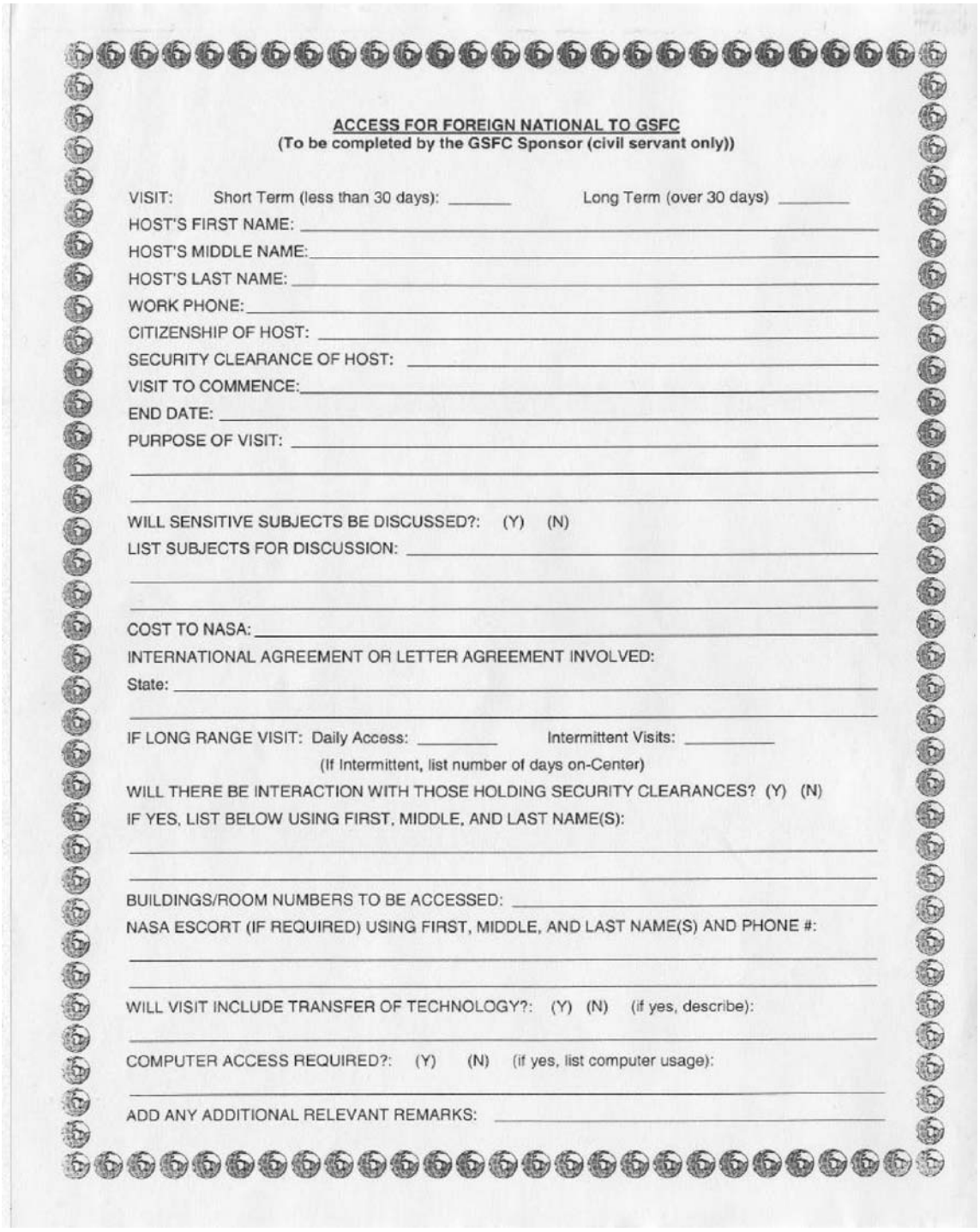
U.S. Visa Type (e.g.; B-1/B-2, H-1 B, J-1, F-1, etc): _____
Visa Expiration Date (mm/dd/yyyy): _____
If J-1, name of U.S. Program Sponsor (attach IAP-66): _____

Passport Information:

Country of Issue: _____
Passport Number: _____
Passport Expiration Date (mm/dd/yyyy): _____

Figure 2

Access For Foreign National to GSFC

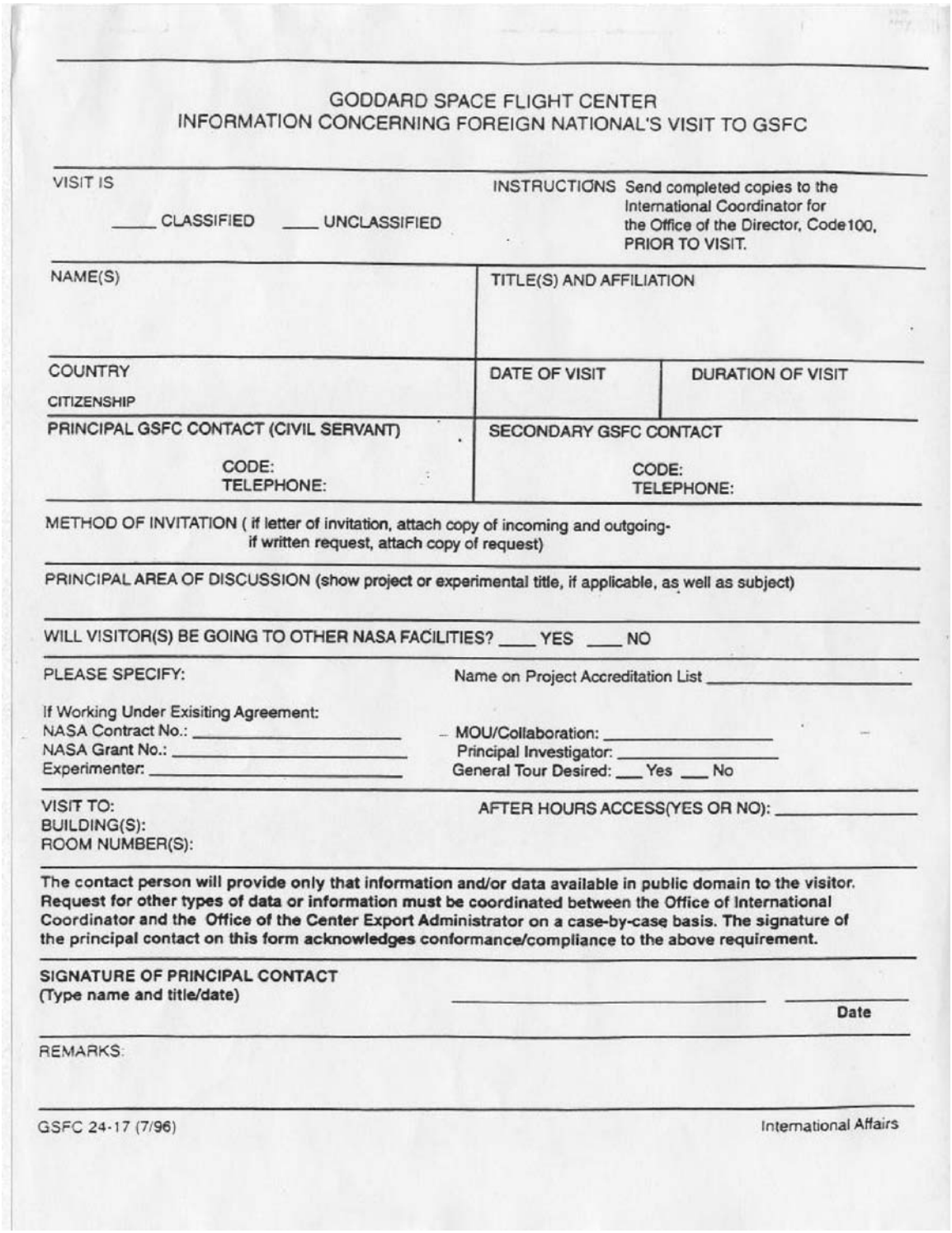


ACCESS FOR FOREIGN NATIONAL TO GSFC
(To be completed by the GSFC Sponsor (civil servant only))

VISIT: Short Term (less than 30 days): _____ Long Term (over 30 days) _____
HOST'S FIRST NAME: _____
HOST'S MIDDLE NAME: _____
HOST'S LAST NAME: _____
WORK PHONE: _____
CITIZENSHIP OF HOST: _____
SECURITY CLEARANCE OF HOST: _____
VISIT TO COMMENCE: _____
END DATE: _____
PURPOSE OF VISIT: _____
_____
_____
WILL SENSITIVE SUBJECTS BE DISCUSSED?: (Y) (N)
LIST SUBJECTS FOR DISCUSSION: _____
_____
_____
COST TO NASA: _____
INTERNATIONAL AGREEMENT OR LETTER AGREEMENT INVOLVED:
State: _____
_____
IF LONG RANGE VISIT: Daily Access: _____ Intermittent Visits: _____
(If Intermittent, list number of days on-Center)
WILL THERE BE INTERACTION WITH THOSE HOLDING SECURITY CLEARANCES? (Y) (N)
IF YES, LIST BELOW USING FIRST, MIDDLE, AND LAST NAME(S):
_____
_____
BUILDINGS/ROOM NUMBERS TO BE ACCESSED: _____
NASA ESCORT (IF REQUIRED) USING FIRST, MIDDLE, AND LAST NAME(S) AND PHONE #:
_____
_____
WILL VISIT INCLUDE TRANSFER OF TECHNOLOGY?: (Y) (N) (if yes, describe):
_____
COMPUTER ACCESS REQUIRED?: (Y) (N) (if yes, list computer usage):
_____
ADD ANY ADDITIONAL RELEVANT REMARKS: _____

Figure 3

Goddard Space Flight Center, Information Concerning Foreign National's Visit to GSFC



GODDARD SPACE FLIGHT CENTER
INFORMATION CONCERNING FOREIGN NATIONAL'S VISIT TO GSFC

VISIT IS
_____ CLASSIFIED ____ UNCLASSIFIED

INSTRUCTIONS Send completed copies to the International Coordinator for the Office of the Director, Code100, PRIOR TO VISIT.

NAME(S)

TITLE(S) AND AFFILIATION

COUNTRY
CITIZENSHIP

DATE OF VISIT

DURATION OF VISIT

PRINCIPAL GSFC CONTACT (CIVIL SERVANT)
CODE:
TELEPHONE:

SECONDARY GSFC CONTACT
CODE:
TELEPHONE:

METHOD OF INVITATION (if letter of invitation, attach copy of incoming and outgoing- if written request, attach copy of request)

PRINCIPAL AREA OF DISCUSSION (show project or experimental title, if applicable, as well as subject)

WILL VISITOR(S) BE GOING TO OTHER NASA FACILITIES? ____ YES ____ NO

PLEASE SPECIFY:

Name on Project Accreditation List _____

If Working Under Exisiting Agreement:
NASA Contract No.: _____
NASA Grant No.: _____
Experimenter: _____
MOU/Collaboration: _____
Principal Investigator: _____
General Tour Desired: ___ Yes ___ No

VISIT TO:
BUILDING(S):
ROOM NUMBER(S):

AFTER HOURS ACCESS(YES OR NO): _____

The contact person will provide only that information and/or data available in public domain to the visitor. Request for other types of data or information must be coordinated between the Office of International Coordinator and the Office of the Center Export Administrator on a case-by-case basis. The signature of the principal contact on this form acknowledges conformance/compliance to the above requirement.

SIGNATURE OF PRINCIPAL CONTACT
(Type name and title/date)

_____ _____
Date

REMARKS:

GSFC 24-17 (7/96) International Affairs

Figure 4
Escorting Visitors Form

The following rules and procedures apply to GSFC escorts responsible for visitors when access to the Center is required. Escorts must be permanently badged civil servant or contractor employees, and may escort more than one visitor, but only one vehicle. Escorts are physically assigned to each visitor and must read and understand the duties and responsibilities outlined below. If additional escorts are required, the original escort must ensure that each escort reads and understands the escort duties and responsibilities. The original escort is the sole accountable party during the entire time the visitor is on the Center.

1. Escorts will meet their visitor each day at the Main Gatehouse (or at the 16W Central Receiving Warehouse in the case of deliveries), and escort the visitor directly to the designated workplace. Bldg: _____ Rm:_____

2. Escorts will ensure that the visitor obtains and displays an Official Visitor badge at all times while on the Center. (NOTE: If the visitor arrives in aprivate vehicle, the escort must immediately precede the visitor in the escort's vehicle to ensure that the visitor arrives at the appropriate building for physical escort for the duration of the day.)

3. Escorts will clearly identify and brief the visitor on the buildings, specific rooms, and areas of the designated workplace.

4. Escorts will advise the visitor that unescorted movement outside the designated workplace will result in termination of the visit.

5. Visitors must be accompanied 100% of the time, except during restroom breaks, at which time the escort will wait outside of the restroom facility.

6. Escorts will ensure that visitors are monitored during the day and that they do not wander into areas and rooms where they are not authorized.

7. Prior notification to and approval by the International Coordinator and/or NASA Headquarters is required for all visitors who are non-US citizens.

(Note: Foreign nationals from non-designated countries require 10-day prior notification; foreign nationals from designated countries require 30-day prior notification).

8. At the end of each visit, escorts will accompany the visitor to one of the exit gates and physically observe the visitor depositing his/her badge for each day of the visit.

I have read and understand the requirements stated herein. I also understand that I may be subject to an audit of my escort responsibilities and

that failure to comply with the provisions set forth above may be grounds for termination of the visit and that I am subject to disciplinary action.

Visitor Name(s): _____

Escort Name:_____ Date/Time:_____

Escort Signature: _____ Escort Code: _____

Figure 5

NASA REQUEST FOR FOREIGN NATIONAL COMPUTER ACCESS

1. BACKGROUND DATA (Please print or type information.)

*** Personal**

Full Name: _____

Birthdate: _____ Birthplace: _____

Current Citizenship or country: _____

Social Security Number, if available: _____

*** Permits**

Passport Number; place & date of issuance: _____

Visa number/type; place/date issued; expiration date:_____

Alien work permit, if applicable: _____

*** Representation**

Reference any international partnership agreements by name/date:
_____

Reference U.S. Govt Agency or NASA Center sponsor by name/date:
_____

2. NATURE OF REQUEST (Please print or type information.)

*** Hardware to be accessed:**

Specific computer system(s) name or title & their Information category(s):
_____

_____

_____

Specific access locations (GSFC building/home/university): _____

_____

_____

*** Files/Applications to be accessed:**

File/Application Name	Information Category	Level of Access Requested	Data Owner Name & Organization
_____			
_____			

*** Access period requested:**

Start Date: _____ Termination Date: _____

3. JUSTIFICATION FOR ACCESS (Please print or type information.)

- **State Exact nature of assignment requiring computer access:**

_____

_____

_____

4. SECURITY CONTROLS TO BE IMPLEMENTED/ USED (Please print or type information.)

- **Physical access controls to facilities and hardware (such as escorted, locked area, restricted periods, none, etc.):**

_____

_____

_____

- **File & system access controls (i.e., passwords; read, write, execute controls; etc.):**

_____

_____

_____

- **Physical, administrative, and automated monitoring (i.e. login logs, file access logs, sign in/out sheets, etc.)**

_____

_____

_____

5. CERTIFICATIONS/CONCURRENCE

- **Foreign National:**

I understand and intend to comply with the statement below.

Unauthorized use of the computer accounts and computer resources to which I am granted access is a violation of Section 799, Title 18, U.S. Code; constitutes theft; and is punishable by law. I understand that I am the only individual to access these accounts and will not knowingly permit access by others without written approval. I understand that my misuse of assigned accounts, and my accessing others' accounts without authorization is not allowed. I understand that these system(s) and resources are subject to monitoring and recording. I further understand that failure to abide by these provisions may constitute grounds for termination of access privileges, administrative action, and/or civil or criminal prosecution.

_____ _____ _____

Name (Print) **Signature** **Date**

- **Sponsor:**

I certify that the information in this request to be correct to the best of my knowledge and that granting access would be in the best interest of the Government.

_____	_____	_____	_____
Name (Print)	Signature	Date	Organization

- **Information Technology Security Official:**

I certify that the information category of the information and systems to be accessed by this request to be correct to the best of my knowledge.

_____	_____	_____	_____
Name (Print)	Signature	Date	Organization

- **Center Export Administrator (CEA)**

I certify that this access request has been reviewed for possibly exposing export controlled information and that steps will be taken to reduce any risk of exposure to an acceptable level.

_____	_____	_____	_____
Name (Print)	Signature	Date	Organization

6. APPROVAL/DISAPPROVAL

This request for access is _____ by the Center Chief of Security.

_____	_____	_____	_____
Name (Print)	Signature	Date	Organization

Comments:/Notes _____

_____

_____

_____

_____

_____

_____

_____